



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,550	10/24/2003	Nicole Brousseau	P07793US01/RFH	7501

881 7590 10/29/2004

STITES & HARBISON PLLC
1199 NORTH FAIRFAX STREET
SUITE 900
ALEXANDRIA, VA 22314

EXAMINER


ISSING, GREGORY C

ART UNIT	PAPER NUMBER
----------	--------------

3662

DATE MAILED: 10/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/691,550	Applicant(s) BROUSSEAU ET AL. 	
	Examiner Gregory C. Issing	Art Unit 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>20040210</u> . | 6) <input type="checkbox"/> Other: ____. |

Art Unit: 3662

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, section (i), it is not clear what the scope of language "wherein such signals are the only ones with the potential to be line-of-sight signals" is. Furthermore, how can the received signals be determined to be "the only ones with the potential to be line-of-sight signals." In section (ii), the language "transmit a synthetic Doppler" is not clearly written; since "Doppler" is an adjective it is not clear what is being transmitted. It appears as though the language should read as "Doppler signal(s)" or "Doppler shift(s)". Since there are two transmitters, it would also appear that each transmits a synthetic Doppler signal. The claim fails to make clear if the "two or more transmitters in section (i) correspond to the same two or more transmitters of section (ii). In section (iii), the language "centre operable to receive signals . . . from the transceiver and to compute and compare a line-of-position from TOA or TDOA data from the first to arrive signal from each transmitter with the angles of transmission" is not understood. It is not clear what actual signals are being processed and it is not clear how they are processed. The language fails to make clear how the transceiver-measured TOAs or TDOAs are used at the processing centre since the processing centre appears to use signals transmitted by the transceiver and not data transmitted in the signals, if this is the case. How is a time difference of arrival measured at the processing centre – what is the time difference a difference between? The language "the line of position intersects with the intersection of the angles of transmission" is not clearly understood. The language "the correct angles of transmission" lacks a proper antecedent basis. Additionally, how are the correct angles determined or derived such that they would be available at the processing centre?

Art Unit: 3662

In claim 4, the language "the reference Doppler shift" is indefinite since it lacks a proper antecedent basis. What is the "reference Doppler shift" and how is it determined or derived or measured? Likewise, what is "the reference Doppler"?

The remaining independent claims should be thoroughly reviewed and corrected for similar problems.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over McReynolds.

McReynolds teaches the system and method substantially as claimed for determining the location of a receiver 30 using a plurality of beacons 20 which generate a rotating beacon signal therefrom. The receiver measures the lds, time data, and the Doppler-shifted directional signal to determine the location. The location system may be utilized in a combination of indoor and outdoor applications, thus, the indoor location of the receiver 30 and the outdoor location of the rotating transmitting beacons are suggested. The receiver 30 may comprise any device whose location is desired indoors/outdoors and thus the use of a cellular phone as such is clearly within the scope of the art and within the ordinary skill of the artisan. The beacon transmitter is configured to transmit an identification signal encoded with a plurality of reference data. Spread spectrum coding is a conventional and well-known encoding scheme used in communications (such as digital cellular CDMA) as well as location determining systems (such as GPS DSSS) due to its effectiveness in multipath environments and as such it would have been an obvious choice of encoding in the indoor

Art Unit: 3662

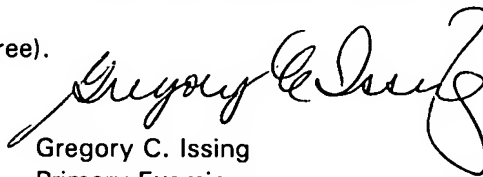
locating environment of the receiver. The information provided allows the determination of the angle of transmission, such as Angle A between reference 51 and line of sight 52.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Zwick et al and Xu et al disclose systems that utilize angular and temporal information. Newstead et al, Cooney, Overbury and Redlich disclose rotating beacons for use in determining location.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory C. Issing whose telephone number is 703-306-4156. The examiner can normally be reached on Monday - Thursday 6:00 AM- 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on 703-306-4171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Gregory C. Issing
Primary Examiner
Art Unit 3662

Gci